WEST Search History

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DATE: Thursday, February 16, 2006

<u>Set</u>	Ouerv	<u>Hit</u>
<u>Name</u>	<u>Query</u>	<u>Count</u>
DB=PGPB, $USPT$, $USOC$, $EPAB$, $JPAB$, $DWPI$; $PLUR=YES$; $OP=ADJ$		
L11	noursei same L9	2
L10	streptomyces same L8	6
L9	dipeptide same L8	42
L8	(gene or sequence or polynucleotide or clone or recombinant) same L6	298
L7	(gene or sequence or polynucleotide or clone or recombinant) same L1	296
L6	((cyclic same dipeptide same oxidase) or (dipeptide same oxidase) or CDO or albC)	11090
L5	cyclic same L4	1
L4	dipeptide same L2	42
L3	diketopiperazine same L2	0
L2	(gene or sequence or polynucleotide or clone or recombinant) same L1	296
L1	((cyclic same dipeptide same oxidase) or (dipeptide same oxidase) or CDO)	11012
	Name DB=PG L11 L10 L9 L8 L7 L6 L5 L4 L3 L2	DB=PGPB, USPT, USOC, EPAB, JPAB, DWPI; PLUR=YES; OP=ADJ L11 noursei same L9 L10 streptomyces same L8 L9 dipeptide same L8 L8 (gene or sequence or polynucleotide or clone or recombinant) same L6 L7 (gene or sequence or polynucleotide or clone or recombinant) same L1 ((cyclic same dipeptide same oxidase) or (dipeptide same oxidase) or CDO or albC) L5 cyclic same L4 L4 dipeptide same L2 L3 diketopiperazine same L2 L2 (gene or sequence or polynucleotide or clone or recombinant) same L1

END OF SEARCH HISTORY

=> index bioscience medicine

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE, AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS, CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB, DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 12:47:13 ON 16 FEB 2006

- => s ((cycl?(w)dipeptide(w)oxidase#) or (peptide(w)oxidase#) or (peptide(w)synthetase#) or CDO or albC)
 - 80 FILE AGRICOLA
 - 25 FILE ANABSTR
 - 17 FILE ANTE
 - 4 FILE AQUALINE
 - 30 FILE AQUASCI
 - 100 FILE BIOENG
 - 736 FILE BIOSIS
 - 106 FILE BIOTECHABS
 - 106 FILE BIOTECHDS
- 12 FILES SEARCHED...
 - 314 FILE BIOTECHNO
 - 183 FILE CABA
 - 8659 FILE CAPLUS
 - 75 FILE CEABA-VTB
 - 6 FILE CIN
 - 27 FILE CONFSCI
 - 4 FILE CROPU
 - 3 FILE DDFB
- 21 FILES SEARCHED...
 - 18 FILE DDFU
 - 2129 FILE DGENE
 - 122 FILE DISSABS
 - 3 FILE DRUGB
- 25 FILES SEARCHED...
 - 23 FILE DRUGU
 - 14 FILE EMBAL
 - 536 FILE EMBASE
 - 534 FILE ESBIOBASE
 - 45 FILE FEDRIP
 - 2 FILE FROSTI
- 34 FILES SEARCHED...
 - 16 FILE FSTA
 - 2255 FILE GENBANK
 - 7 FILE HEALSAFE
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 - 374 FILE LIFESCI
 - 656 FILE MEDLINE
 - 20 FILE NIOSHTIC
 - 85 FILE NTIS 4 FILE OCEAN
 - 1006 FILE PASCAL
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 - 2 FILE PHIN
 - 3331 FILE PROMT
 - 1 FILE PROUSDDR
 - 3 FILE RDISCLOSURE
 - 1652 FILE SCISEARCH 1 FILE SYNTHLINE
 - 963 FILE TOXCENTER
 - 3233 FILE USPATFULL
 - 271 FILE USPAT2
 - 1 FILE VETU
 - 5 FILE WATER
 - 1741 FILE WPIDS
- 68 FILES SEARCHED...
 - 3 FILE WPIFV
 - 1741 FILE WPINDEX
- 3 FILE IPA 71 FILES SEARCHED...
 - 2773 FILE NLDB

54 FILES HAVE ONE OR MORE ANSWERS, 73 FILES SEARCHED IN STNINDEX

L1 QUE ((CYCL?(W) DIPEPTIDE(W) OXIDASE#) OR (PEPTIDE(W) OXIDASE#) OR (PEPTIDE (W) SYNTHETASE#) OR CDO OR ALBC)

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=> d rank
     8659 CAPLUS
Fl
F2
     3331 PROMT
F3
     3233 USPATFULL
     2773 NLDB
F5
     2255 GENBANK
F6
     2129 DGENE
F7
     1741 WPIDS
    1741 WPINDEX
F8
F9
     1652 SCISEARCH
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     1006 PASCAL
      963 TOXCENTER
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      741 IFIPAT
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      736 BIOSIS
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      656 MEDLINE
      536 EMBASE
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      534 ESBIOBASE
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      271 USPAT2
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      183 CABA
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      122 DISSABS
      106 BIOTECHABS
F23
F24
      106 BIOTECHDS
F25
      100 BIOENG
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=> file f1-f4, f7, f9-f19

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=>sL15 FILES SEARCHED... 7 FILES SEARCHED... 27724 L1

=> s (gene# or sequence# or polynucleotide# or clone# or recombinant or express?)(s)L2 3 FILES SEARCHED...

3371 (GENE# OR SEQUENCE# OR POLYNUCLEOTIDE# OR CLONE# OR RECOMBINANT

7 FILES SEARCHED...

13 FILES SEARCHED...

1.3

OR EXPRESS?)(S) L2

=> s streptomyces(s)L3 382 STREPTOMYCES(S) L3

=> s (dipeptide(s)derivative#)(s)L4 2 (DIPEPTIDE(S) DERIVATIVE#)(S) L4

=> s dipeptide#(s)L4 L6 19 DIPEPTIDE#(S) L4

=> dun rem 16 PROCESSING COMPLETED FOR L6 10 DUP REM L6 (9 DUPLICATES REMOVED)

=> d ibib abs 17 1-10

L7 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN ACCESSION NUMBER: 2006:15762 CAPLUS

DOCUMENT NUMBER: TITLE:

144:101996

Producing dipeptide or dipeptide derivative with dipeptide-synthesizing enzymes

INVENTOR(S): Hashimoto, Shinichi; Ikeda, Hajime; Tabata, Kazuhiko PATENT ASSIGNEE(S): Kyowa Hakko Kogyo Co., Ltd., Japan

PCT Int. Appl., 121 pp. SOURCE:

CODEN: PIXXD2

DOCUMENT TYPE: LANGUAGE: Japanese FAMILY ACC. NUM. COUNT: 1 PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

Al 20060105 WO 2005-JP11638 20050624 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: JP 2004-189008 A 20040625 AB The present invention provides a method of producing a dipeptide or a

dipeptide deriv. by using, an enzyme having an activity of forming a dipeptide or dipeptide deriv. from amino acids or amino acid derivs. or an optionally processed culture of cells having an ability to produce the above protein, supplying the enzyme source, amino acids or amino acid derivs. and ATP into an aq. medium, thus forming and accumulating the dipeptide or the dipeptide deriv. in the medium and then harvesting the dipeptide or the dipeptide deriv. from the medium. The dipeptide synthesis method using Bacillus dipeptide-forming enzyme has been developed. The ywfE genes for the D-alanine:D-alanine ligase have been cloned from Bacillus species. The prodn. of various dipeptides by the culture of transformant E. coli was demonstrated. The ***albC***

genes for the ***dipeptide*** -forming enzyme have been ***cloned*** from albonoursin-producing ***Streptomyces*** species

S. noursei strain IFO15452 and S. albulus strain IF014147.

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 10 USPATFULL on STN **DUPLICATE 1**

ACCESSION NUMBER: 2005;330646 USPATFULL

TITLE:

Process for producing dipeptides

INVENTOR(S):

Hashimoto, Shin-ichi, Hofu-shi, JAPAN

Tabata, Kazuhiko, Tokyo, JAPAN

PATENT ASSIGNEE(S): KYOWA HAKKO KOGYO CO., LTD., Tokyo, JAPAN (non-U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 2005287626 A1 20051229 APPLICATION INFO.: US 2005-165211 A1 20050624 (11)

NUMBER DATE

PRIORITY INFORMATION: JP 2004-189011 20040625

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: NIXON & VANDERHYE, PC, 901 NORTH GLEBE ROAD, 11TH

FLOOR, ARLINGTON, VA, 22203, US

NUMBER OF CLAIMS: 15 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 6 Drawing Page(s)

LINE COUNT:

8029

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a process for producing a dipeptide which comprises culturing in a medium a microorganism which has the ability to produce a protein having the activity to form the dipeptide from one or more kinds of amino acids and which has the ability to produce at least one of said one or more kinds of amino acids, allowing the dipeptide to form and accumulate in the medium, and recovering the dipeptide from the medium.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 3 OF 10 USPATFULL on STN **DUPLICATE 2**

ACCESSION NUMBER: 2005:49850 USPATFULL

TITLE: Bacterial nitric oxide synthases and uses thereof

INVENTOR(S): Loria, Rosemary, Ithaca, NY, UNITED STATES

Crane, Brain, Ithaca, NY, UNITED STATES Kers, Johan, Ithaca, NY, UNITED STATES Gibson, Donna M., Ithaca, NY, UNITED STATES Wach, Michael J., Greenbelt, MD, UNITED STATES

NUMBER KIND DATE

PATENT INFORMATION: US 2005042645 A1 20050224 APPLICATION INFO.: US 2004-858706 A1 20040602 (10)

NUMBER DATE

PRIORITY INFORMATION: US 2003-475111P 20030602 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: Michael L. Goldman, Esq., NIXON PEABODY LLP, Clinton

Square, P.O. Box 31051, Rochester, NY, 14603-1051

NUMBER OF CLAIMS: 74 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 7 Drawing Page(s)

LINE COUNT: 2664

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to isolated nucleic acid molecules encoding nitric oxide synthases. The isolated nucleic acid molecules and their encoded protein or polypeptides are useful in methods for attaching a nitrogen group to a target moiety of a compound and for synthesizing a nitrogen-modified compound in a transgenic host cell. The present invention also relates to expression systems and host cells containing the nucleic acids of the present invention, as well as a method of recombinantly producing the nitric oxide synthases of the present invention.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:1168973 CAPLUS

DOCUMENT NUMBER: 143:433720

TITLE: Development of dipeptide synthesis method using

Streptomyces enzymes

INVENTOR(S): Hashimoto, Shin-Ichi; Tabata, Kazuhiko; Noguchi,

Ayako; Adachi, Yugo

PATENT ASSIGNEE(S): Kyowa Hakko Kogyo Co., Ltd., Japan

SOURCE: PCT Int. Appl., 47 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: Japanese FAMILY ACC. NUM. COUNT: 1 PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

WO 2005103260 A1 20051103 WO 2005-JP7626 20050421

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.:

JP 2004-125486 A 20040421

AB The dipeptide synthesis method using Streptomyces dipeptide-forming enzyme has been developed. The ***albC*** ***genes*** for the ***dipeptide*** -forming enzyme have been ***cloned*** from albonoursin-producing ***Streptomyces*** species S. noursei strain

IFO15452 and S. albulus strain IFO14147. These enzymes (or sequence variants) are expressed in the host E. coli cells that have been transformed with the vectors contg. the albC transgenes (or sequence variants). Dipeptides are produced from amino acids in the presence of ATP by using the transformant E. coli cultured materials, cell lysate or partially purified fractions as the enzyme sources. L- or D-amino acids including Ala, Gln, Glu, Val, Leu, Ile, Pro, Phe, Trp, Met, Ser, Thr, Cys, Asn, Tyr Lys, Arg, His, Asp, alpha-amino butyric acid, azaserine, theanine, 4-hydroxyproline, 3-hydroxyproline, ornithine, citrulline and 6-diazo-5-oxonorleucine are claimed as applicable substrates for the reaction. The prodn. of L-Leu-L-Phe and L-Ple-L-Leu in the L-Phe and L-Leu-contg, medium by the culture of transformant E. coli was

demonstrated. The prodn. of the dipeptides and cyclo dipeptides by the incubation of the purified enzyme with amino acids was also demonstrated.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 5 OF 10 USPATFULL on STN

ACCESSION NUMBER: 2005:330647 USPATFULL

TTTLE:

Process for producing dipeptides or dipeptide

derivatives

INVENTOR(S): Hashimoto, Shin-ichi, Hofu-shi, JAPAN

Ikeda, Hajime, Hofu-shi, JAPAN

Yagasaki, Makoto, Tokyo, JAPAN

PATENT ASSIGNEE(S): Kyowa Hakko Kogyo Co., Ltd., Tokyo, JAPAN (non-U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 2005287627 A1 20051229 APPLICATION INFO.: US 2005-165226 A1 20050624 (11)

> NUMBER DATE

PRIORITY INFORMATION: JP 2004-189007 20040625

DOCUMENT TYPE:

Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: NIXON & VANDERHYE, PC, 901 NORTH GLEBE ROAD, 11TH

FLOOR, ARLINGTON, VA, 22203, US

NUMBER OF CLAIMS: 34

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 4 Drawing Page(s)

LINE COUNT: 9924

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a process for producing a dipeptide or a dipeptide derivative using a phosphate donor, a substance selected from the group consisting of adenosine-5'-monophosphate, adenosine-5'diphosphate and adenosine-5'-triphosphate, one or more kinds of amino acids or amino acid derivatives, and as enzyme sources, a protein having polyphosphate kinase activity, or a culture of cells having the ability to produce the protein or a treated matter of the culture, and a protein having the activity to ATP-dependently form the dipeptide or dipeptide derivative from one or more kinds of amino acids or amino acid derivatives, or a culture of cells having the ability to produce the protein or a treated matter of the culture.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 6 OF 10 USPATFULL on STN

ACCESSION NUMBER: 2003:78516 USPATFULL

STAPHYLOCOCCUS AUREUS POLYNUCLEOTIDES AND SEQUENCES TITLE:

INVENTOR(S): KUNSCH, CHARLES A., GAITHERSBURG, MD, UNITED STATES

CHOI, GIL A., ROCKVILLE, MD, UNITED STATES

BARASH, STEVEN C., ROCKVILLE, MD, UNITED STATES DILLON, PATRICK J., GAITHERSBURG, MD, UNITED STATES FANNON, MICHAEL R., SILVER SPRING, MD, UNITED STATES ROSEN, CRAIG A., LAYTONSVILLE, MD, UNITED STATES

NUMBER KIND DATE

PATENT INFORMATION: US 2003054436 A1 20030320

US 6737248 B2 20040518

APPLICATION INFO.: US 1997-781986 A1 19970103 (8)

NUMBER DATE

PRIORITY INFORMATION: US 1996-9861P 19960105 (60)

Utility DOCUMENT TYPE:

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850

NUMBER OF CLAIMS: 29

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 2 Drawing Page(s)

LINE COUNT:

13414

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides polynucleotide sequences of the genome of Staphylococcus aureus, polypeptide sequences encoded by the polynucleotide sequences, corresponding polynucleotides and polypeptides, vectors and hosts comprising the polynucleotides, and assays and other uses thereof. The present invention further provides polynucleotide and polypeptide sequence information stored on computer readable media, and computer-based systems and methods which facilitate its use.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 7 OF 10 USPATFULL on STN

ACCESSION NUMBER: 2003:190673 USPATFULL

TITLE: Staphylococcus aureus polynucleotides and sequences Kunsch, Charles A., Norcross, GA, United States INVENTOR(S):

Choi, Gil H., Rockville, MD, United States Barash, Steven, Rockville, MD, United States Dillon, Patrick J., Carlsbad, CA, United States Fannon, Michael R., Silver Spring, MD, United States Rosen, Craig A., Laytonsville, MD, United States

PATENT ASSIGNEE(S): Human Genome Sciences, Inc., Rockville, MD, United

States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 6593114 B1 20030715 APPLICATION INFO.: US 1997-956171 19971020 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1997-781986, filed

on 3 Jan 1997

NUMBER DATE

PRIORITY INFORMATION: US 1996-9861P 19960105 (60)

DOCUMENT TYPE: Utility FILE SEGMENT:

GRANTED

PRIMARY EXAMINER: Duffy, Patricia A.

LEGAL REPRESENTATIVE: Human Genome Sciences, Inc.

NUMBER OF CLAIMS: 15

EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 2 Drawing Figure(s); 2 Drawing Page(s) 7835

LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides polynucleotide sequences of the genome of Staphylococcus aureus, polypeptide sequences encoded by the polynucleotide sequences, corresponding polynucleotides and polypeptides, vectors and hosts comprising the polynucleotides, and assays and other uses thereof. The present invention further provides polynucleotide and polypeptide sequence information stored on computer readable media, and computer-based systems and methods which facilitate

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3

2002:970708 CAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER:

138:281989

TITLE:

The Albonoursin Gene Cluster of S. noursei. Biosynthesis of Diketopiperazine Metabolites

Independent of Nonribosomal Peptide Synthetases

AUTHOR(S): Lautru, Sylvie; Gondry, Muriel; Genet, Roger; Pernodet Jean-Luc

CORPORATE SOURCE: Departement d'Ingenierie et d'Etudes des Proteines,

CEA/Saclay, Gif-sur-Yvette, F91191, Fr.

SOURCE: Chemistry & Biology (2002), 9(12), 1355-1364

CODEN: CBOLE2; ISSN: 1074-5521

PUBLISHER:

Cell Press

DOCUMENT TYPE: LANGUAGE:

Journal

English

AB Albonoursin [cyclo(.DELTA.Phe-.DELTA.Leu)], an antibacterial peptide

produced by Streptomyces noursei, is one of the simplest representatives of the large diketopiperazine (DKP) family. Formation of .alpha., beta. unsaturations was previously shown to occur on cyclo(L-Phe-L-Leu), catalyzed by the cyclic dipeptide oxidase (CDO). We used CDO peptide sequence information to isolate a 3.8 kb S. noursei DNA fragment that directs albonoursin biosynthesis in Streptomyces lividans. This fragment encompasses four complete genes: albA and albB, necessary for CDO activity; albC, sufficient for cyclic dipeptide precursor formation, although displaying no similarity to non ribosomal peptide synthetase (NRPS) genes; and albD, encoding a putative membrane protein. This first isolated DKP biosynthetic gene cluster should help to elucidate the mechanism of DKP formation, totally independent of NRPS, and to characterize novel DKP biosynthetic pathways that could be engineered to increase the mol. diversity of DKP derivs.

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 9 OF 10 Elsevier BIOBASE COPYRIGHT 2006 Elsevier Science B.V. on

STN

DUPLICATE

ACCESSION NUMBER:

2000286617 ESBIOBASE

TITLE:

The txtAB genes of the plant pathogen Streptomyces

acidiscabies encode a peptide synthetase required for phytotoxin thaxtomin A production and pathogenicity

AUTHOR:

Healy F.G.; Wach M.; Krasnoff S.B.; Gibson D.M.; Loria

R.
CORPORATE SOURCE:

Healy F.G.; Wach M.; Krasnoff S.B.; Gibson D.M.; Loria

E SOURCE: R. Loria, Department of Plant Pathology, 334 Plant Science Building, Cornell University, Ithaca, NY

14853, United States. E-mail: rl21@cornell.edu

SOURCE:

Molecular Microbiology, (2000), 38/4 (794-804), 45

reference(s)

CODEN: MOMIEE ISSN: 0950-382X

DOCUMENT TYPE: Journal; Article COUNTRY: United Kingdom LANGUAGE: English

SUMMARY LANGUAGE:

English

AB Four ***Streptomyces*** species have been described as the causal agents of scab disease, which affects economically important root and tuber crops worldwide. These species produce a family of cyclic ***dipeptides***, the thaxtomins, which alone mimic disease symptomatology. Structural considerations suggest that thaxtomins are synthesized non-ribosomally. Degenerate oligonucleotide primers were used to amplify conserved portions of the acyladenylation module of

peptide ***synthetase*** from genomic DNA of representatives of the four species. Pairwise Southern hybridizations identified a ***peptide*** ***synthetase*** acyladenylation module conserved among three species. The complete nucleotide ***sequences*** of two ***peptide*** ***synthetase*** ***genes*** (txtAB) were determined from S. acidiscabies 84.104 cosmid library ***clones*** . The organization of the deduced TxtA and TxtB ***peptide*** ***synthetase*** catalytic domains is consistent with the formation of N-methylated cyclic ***dipeptides*** such as thaxtomins. Based on high-performance liquid chromatography (HPLC) analysis, thaxtomin A production was abolished in txtA ***gene*** disruption mutants. Although the growth and morphological characteristics of the mutants were identical to those of the parent strain, txtA mutants were avirulent on potato tubers. Moreover, introduction of the thaxtomin synthetase cosmid into a txtA mutant restored both pathogenicity and thaxtomin A production, demonstrating a critical role for thaxtomins in pathogenesis.

L7 ANSWER 10 OF 10 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on

STN

DUPLICATE 5

ACCESSION NUMBER: 1998;325080 SCISEARCH THE GENUINE ARTICLE: ZK570

TITLE:

Molecular cloning of the actinomycin synthetase gene cluster from Streptomyces chrysomallus and functional heterologous expression of the gene encoding actinomycin

synthetase II

AUTHOR:

Schauwecker F; Pfennig F; Schroder W; Keller U (Reprint)

CORPORATE SOURCE: Tech Univ Berlin, Max Volmer Inst, Fachgebiet Biochem &

Mol Biol, Franklinstr 29, D-10587 Berlin, Germany (Reprint); Tech Univ Berlin, Max Volmer Inst, Fachgebiet Biochem & Mol Biol, D-10587 Berlin, Germany; Free Univ

Berlin, Inst Biochem, D-14195 Berlin, Germany

COUNTRY OF AUTHOR: Germany

SOURCE: JOURNAL OF BACTERIOLOGY, (MAY 1998) Vol. 180, No. 9, pp.

2468-2474.

ISSN: 0021-9193.

PUBLISHER: AMER SOC MICROBIOLOGY, 1752 N ST NW, WASHINGTON, DC

20036-2904 USA.

DOCUMENT TYPE: Article; Journal

LANGUAGE: English REFERENCE COUNT: 32

ENTRY DATE: Entered STN: 1998 Last Updated on STN: 1998

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

The actinomycin synthetases ACMS I, TI, and III catalyze the assembly AB of the acyl peptide lactone precursor of actinomycin by a nonribosomal mechanism, me have cloned the genes of ACMS I (acmA) and ACMS II (acmB) by hybridization screening of a cosmid library of Streptomyces chrysomallus DNA with synthetic oligonucleotides derived from peptide sequences of the two enzymes. Their genes were found to be closely linked and are arranged in opposite orientations. Hybridization mapping and partial sequence analyses indicate that the gene of an additional peptide synthetase, most likely the gene of ACMS III (acmC), is located immediately downstream of acmB in the same orientation. The protein sequence of ACMS II, deduced from acmB, shows that the enzyme contains two amino acid activation domains, which are characteristic of peptide synthetases, and an additional epimerization domain. Heterologous ***expression*** of acmB from the mel promoter of plasmid PIJ702 in ***Streptomyces*** lividans yielded a functional 280-kDa ***peptide*** ***synthetase*** which activates threonine and valine as enzyme bound thioesters, It also catalyzes the ***dipeptide*** formation of threonyl-L-valine, which is epimerized to threonyl-D-valine. Both of these dipeptides are enzyme bound as thioesters. This catalytic activity is identical to the in vitro activity of ACMS II from S. chrysomallus.

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L1 QUE ((CYCL?(W) DIPEPTIDE(W) OXIDASE#) OR (PEPTIDE(W) OXIDASE#)

FILE 'CAPLUS, PROMT, USPATFULL, NLDB, WPIDS, SCISEARCH, PASCAL, TOXCENTER, IFIPAT, BIOSIS, MEDLINE, EMBASE, ESBIOBASE, JICST-EPLUS, LIFESCI, BIOTECHNO' ENTERED AT 12:53:24 ON 16 FEB 2006

- L2 27724 S L1
- L3 3371 S (GENE# OR SEQUENCE# OR POLYNUCLEOTIDE# OR CLONE# OR RECOMBINA
- L4 382 S STREPTOMYCES(S)L3
- L5 2 S (DIPEPTIDE(S)DERIVATIVE#)(S)L4
- L6 19 S DIPEPTIDE#(S)L4
- L7 10 DUP REM L6 (9 DUPLICATES REMOVED)

=> log y